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Intellectual Property Administration
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EXAMINER

BELL, MELTIN

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 11/12/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,084

Applicant(s)

LIU ET AL.

Examiner

Meltin Bell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to application **09854084** filed **May 10, 2001**.

Claims 1-24 have been examined.

Information Disclosure Statement

Applicant is respectfully reminded of the ongoing Duty to disclose 37 C.F.R. 1.56 all pertinent information and material pertaining to the patentability of applicant's claimed invention, by submitting in a timely manner PTO-1449, Information Disclosure Statement (IDS) with the filing of applicant's application or thereafter.

Drawings

The United States Patent and Trademark Office of Draftperson's Patent Drawings Review have reviewed the formal drawings.

The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the drawings.

The drawings are objected to because:

- Conflicting use of 100 in Figures 3 and 6 as well as on page 29, line 29.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities:

- Laptop computer system 98 on page 11, line 8 is missing from the Figures.
- Item 143 on page 16, line 7 is an On-Screen Cursor Control Device in Figure 3 not a display device.
- 100 on page 23, line 11 and page 23, line 22 is used to refer to a customer S100 (SN) and customers, respectively, in conflict with computer system 100 in Figure 3. Examiner suggests using 'customer S100 (SN)' or 'one hundred' as on page 21, line 31, respectively.

Appropriate correction is required.

Claim Objections

Claims 1, 5, 9, 13, 17 and 21 are objected to because of the following informalities:

Regarding claim 1, step d:

- 'said training set said mapped' would read better as 'said mapped training set'

Regarding claim 5:

- 'said training set said mapped' would read better as 'said mapped training set'

Regarding claim 9, step d:

- 'said training set said mapped' would read better as 'said mapped training set'

Regarding claim 13:

- 'said training set said mapped' would read better as 'said mapped training set'

Regarding claim 17, step d:

- 'said training set said mapped' would read better as 'said mapped training set'

Regarding claim 21:

- 'said training et said mapped' would read better as 'said mapped training set'

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by *Becker et al* U.S. Patent Number **5,930,803 (July 27, 1999)**.

Regarding claim 1:

Becker et al teaches,

- acquiring and storing a training set, said training set an existent database of information, wherein said information are attributes of said subject, wherein said training set is to provide a base of data for said method (FIGS. 4-11C; column 1, lines 46-48,

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"Inducers require...the class label"; column 23, lines 9-14, "Computer programs... as discussed herein")

- calculating and storing a best behavioral model for predicting said outcome, provided an action is applied to said subject (column 1, lines 31-32, "the classifier predicts...more other attributes"; column 9, lines 37-56, "For this example iris database...respective pie slice")

- mapping of said training set to said best behavioral model within a business metric space, wherein said mapping is subsequently stored (column 3, lines 12-14, "the evidence inducer...the evidence classifier"; column 9, lines 37-56, "For this example iris database...respective pie slice")

- selecting and storing a random sub-sample of said training set said mapped to said best behavioral model, said random sub-sample for reducing computational requirements when determining an optimized strategy (column 20, lines 60-65, "a random portion...an accuracy estimate")

- determining and storing said optimized strategy for said random sub-sample, said optimized strategy for providing an optimal action relative to said subject for said objective of said outcome (column 7, lines 36-38, "the complete conditional...other design criteria")

Regarding claim 2:

Becker et al further teaches,

- said subject is a customer of a business entity, said business entity enabled to interact with said customer in a web based environment, and wherein said action is a promotion

offered by said business entity (FIG. 13; column 22, lines 50-52, "communications interface...as the Internet")

Regarding claim 3:

Becker et al further teaches,

- allocating a dimensional attribute vector relative to each subject referenced in said training set (column 18, lines 11-23, "FIG. 13 further illustrates...evidence classifier visualization")

Regarding claim 4:

Becker et al further teaches,

- deriving a function from said action being applied to said subject, wherein said function equates to said best behavioral model and said function is represented as a dimensional vector (column 7, lines 9-19, "A first label...selected attribute value")

Regarding claim 5:

Becker et al further teaches,

- said subject of said training set said mapped is a separate point in said business metric space (column 18, lines 11-23, "FIG. 13 further illustrates...evidence classifier visualization")

Regarding claim 6:

Becker et al further teaches,

- utilizing linear programming to calculate said optimal action, wherein said optimal action is associated with the largest number of subjects (column 7, lines 36-38, "the

complete conditional...other design criteria"; column 23, lines 9-14, "Computer programs...as discussed herein")

Regarding claim 7:

Becker et al further teaches,

- said optimized strategy provides a logical division for classification of said subject, so as to determine said optimal action of said objective of an outcome, relative to said subject (column 4, lines 54-57, "the evidence inducer...different as possible")

Regarding claim 8:

Becker et al further teaches,

- a new subject, said new subject not from said training set, is mapped to said best behavioral model and said stored optimized strategy, such that said new subject is included in said classification of said logical division, so as to provide an optimal action for said objective of said outcome, relative to said new subject (column 19, lines 15-26, "Data destination panel...data transformation panel")

Regarding claim 9:

Becker et al further teaches,

- a bus (FIG. 16, Item 1602)
- a memory unit coupled to said bus (FIG. 16, Item 1608)
- at least one processor coupled to said bus, said at least one processor for executing a method for action selection based upon an objective of an outcome relative to a subject (FIG. 16, Item 1604; column 23, lines 9-14, "Computer programs...as discussed herein")

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- acquiring and storing a training set, said training set an existent database of information, wherein said information are attributes of said subject, wherein said training set is to provide a base of data for said method (FIGS. 4-11C; column 1, lines 46-48, "Inducers require...the class label"; column 23, lines 9-14, "Computer programs...as discussed herein")
- calculating and storing a best behavioral model for predicting said outcome, provided an action is applied to said subject (column 1, lines 31-32, "the classifier predicts...more other attributes"; column 9, lines 37-56, "For this example iris database...respective pie slice")
- mapping of said training set to said best behavioral model within a business metric space, wherein said mapping is subsequently stored (column 3, lines 12-14, "the evidence inducer...the evidence classifier"; column 9, lines 37-56, "For this example iris database...respective pie slice")
- selecting and storing a random sub-sample of said training set said mapped to said best behavioral model, said random sub-sample for reducing computational requirements when determining an optimized strategy (column 20, lines 60-65, "a random portion...an accuracy estimate")
- determining and storing said optimized strategy for said random sub-sample, said optimized strategy for providing an optimal action relative to said subject for said objective of said outcome (column 7, lines 36-38, "the complete conditional...other design criteria")

Regarding claim 10:

Rejection of claim 9 is incorporated and further claim contains limitation(s) recited in claim 2, therefore claim 10 is rejected under the same rational as claim 2.

Regarding claim 11:

Becker et al further teaches,

- allocating a dimensional attribute vector relative to each subject referenced in said database (column 18, lines 11-23, "FIG. 13 further illustrates...evidence classifier visualization")

Regarding claim 12:

Rejection of claim 9 is incorporated and further claim contains limitation(s) recited in claim 4, therefore claim 12 is rejected under the same rational as claim 4.

Regarding claim 13:

Rejection of claim 9 is incorporated and further claim contains limitation(s) recited in claim 5, therefore claim 13 is rejected under the same rational as claim 5.

Regarding claim 14:

Rejection of claim 9 is incorporated and further claim contains limitation(s) recited in claim 6, therefore claim 14 is rejected under the same rational as claim 6.

Regarding claim 15:

Becker et al further teaches,

- said optimized strategy provides a logical division for classification of said subject, so as to determine said optimal action of said objective of said outcome, relative to said subject (column 4, lines 54-57, "the evidence inducer...different as possible")

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Regarding claim 16:

Rejection of claim 9 is incorporated and further claim contains limitation(s) recited in claim 8, therefore claim 16 is rejected under the same rational as claim 8.

Regarding claim 17:

Becker et al further teaches,

- acquiring and storing a training set, said training set an existent database of information, said information are attributes of said subject, wherein said training set is to provide a base of data for said method (FIGS. 4-11C; column 1, lines 46-48, "Inducers require...the class label"; column 23, lines 9-14, "Computer programs...as discussed herein")
- calculating and storing a best behavioral model for predicting said outcome, provided an action is applied to said subject (column 1, lines 31-32, "the classifier predicts...more other attributes"; column 9, lines 37-56, "For this example iris database...respective pie slice")
- mapping of said training set to said best behavioral model within a business metric space, wherein said mapping is subsequently stored (column 3, lines 12-14, "the evidence inducer...the evidence classifier"; column 9, lines 37-56, "For this example iris database...respective pie slice")
- selecting and storing a random sub-sample of said training set said mapped to said best behavioral model, said random sub-sample utilized for reducing computational requirements when determining an optimized strategy (column 20, lines 60-65, "a random portion...an accuracy estimate")

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- determining and storing said optimized strategy for said random sub-sample, said optimized strategy for providing an optimal action relative to said subject for said objective of said outcome (column 7, lines 36-38, "the complete conditional... other design criteria")

Regarding claim 18:

Rejection of claim 17 is incorporated and further claim contains limitation(s) recited in claim 2, therefore claim 16 is rejected under the same rational as claim 2.

Regarding claim 19:

Rejection of claim 17 is incorporated and further claim contains limitation(s) recited in claim 3, therefore claim 19 is rejected under the same rational as claim 3.

Regarding claim 20:

Becker et al further teaches,

- deriving a function from said action being applied to said subject, wherein said function equates to said best behavioral model, and wherein said function is represented as a dimensional vector (column 7, lines 9-19, "A first label... selected attribute value")

Regarding claim 21:

Becker et al further teaches,

- said subject of said training et said mapped is a separate point within said business metric space (column 18, lines 11-23, "FIG. 13 further illustrates... evidence classifier visualization")

Regarding claim 22:

Rejection of claim 17 is incorporated and further claim contains limitation(s) recited in claim 6, therefore claim 22 is rejected under the same rational as claim 6.

Regarding claim 23:

Rejection of claim 17 is incorporated and further claim contains limitation(s) recited in claim 7, therefore claim 23 is rejected under the same rational as claim 7.

Regarding claim 24:

Becker et al further teaches,

- a new subject, said new subject not from said training set, is mapped to said best behavioral model and said optimized strategy, such that said new subject is included in said classification of said logical division, so as to provide an optimal action for said objective of said outcome, relative to said new subject (column 19, lines 15-26, "Data destination panel...data transformation panel")

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- *Becker et al*; U.S. Patent Number 5,930,803
- *Galperin et al*; U.S. Patent Number 6,185,543
- *Bowman-Amuah*; U.S. Patent Number 6,345,239
- *Hoskins et al* ; U.S. Patent Number 5,377,307
- *Takahashi et al* ; U.S. Patent Number 5,452,400

- *Chaudhuri et al*; U.S. Patent Number 6,278,989
- *E. Chalom, V.M. Bove, Jr.*; "Segmentation of an image sequence using multi-dimensional image attributes"; 1996 International Proceedings Conference on Image Processing; Vol.1, Iss., 16-19; Sep 1996; pp 525-528 vol.2
- P.S. Georgilakis, N.D. Hatziaargyriou, A.D. Doulamis, N.D. Doulamis, S.D. Kollias; "A neural network framework for predicting transformer core losses"; Proceedings of the 21st 1999 IEEE International Conference Power Industry Computer Applications; PICA '99; July 1999; pp 301-308

Any inquiry concerning this communication or earlier communications from the Office should be directed to Meltin Bell whose telephone number is 703-305-0362.

This Examiner can normally be reached on Mon - Fri 7:30 am - 4:30 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anil Khatri, can be reached on 703-305-0282. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MB


ANIL KHATRI
SUPERVISORY PATENT EXAMINER